



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: U.S. PATENT AND TRADEMARK OFFICE
Washington, D.C. 20541
www.uspto.gov

APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 825,446	04 04 2001	Keishi Nakamura	010481	1801

23850 7590 03 01 2002

ARMSTRONG, WESTERMAN & HATTORI, LLP
1725 K STREET, NW.
SUITE 1000
WASHINGTON, DC 20006

EXAMINER

EASTHOM, KARL D

ART UNIT	PAPER NUMBER
----------	--------------

2832

DATE MAILED: 03 01 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/825,446

Applicant(s)

Nakamura

Examiner

Karl Easthom

Art Unit

2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 16, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) Notice of References Cited: PTO 892

18) Interoffice Summary: PTO 413 Paper No. 5

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "rolled" is not described sufficiently to convey how "rolling" affixes the strips. In claims 3 and 13, "without a cutout" is misdescriptive since Figs 3A-3c show portions removed or "cutout" - i.e, applicant discloses "shaving" at page 13, so that it is not clear how trimming occurs without a cutout, absent further defining clarifying language as to where the lack of cutouts occur. That is, applicant may disclose "no cutouts" on certain parts of the resistor body, but there is a "cutout" on other parts, so that there is no disclosure for "no cutouts" anywhere on the body.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 3 and 13, "without a cutout" is misdescriptive since Figs 3A-3c show portions removed or "cutout" - i.e, applicant discloses "shaving" at page 13, so that it is not clear

how trimming occurs without a cutout, absent further defining clarifying claimed language as to where the lack of cutouts occur.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

6. Claims 1, 3-5, 11, 13 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by .McKim, Jr. et al. The claimed invention is disclosed at 6c with contacts 645 fusion welded as seen at the abstract. Fusion creates diffusion. In claim 13, trimming by grinding or controlling the thickness of the metal is disclosed at col. 6, lines 15-30 as prior art. Also - shearing and punching create the desired size, so that initial "trimming" occurs by cutting to form the correct size at col. 2, lines 46-50. It is also noted at col. 6, lines 6-30 that the prior art "trimming" by controlling thickness and shaving edges results in 20% tolerances, hence, claims 3- 5 and 13 are met.

7. Claims 1-2, 7 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Matsuo et al. et al. (JP 2000-114009) Matsuo discloses rolling a resistive metal to metal strips in the abstract. In claim 7, Fig. 13 discloses the two electrodes 58 on both surfaces of the resistor 56. In claims 2 and 9, the solder is depicted at Fig. 7 used for bonding the wire to the electrodes 58.

8. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-4, 6-11, 13-14, 16-17 and 19-20 are rejected under 35 U.S.C. 102(e) as anticipated by Szwarc et al. '234 or, in the alternative, under 35 U.S.C. 103(a) as obvious over Szwarc et al. in view of McKim, Jr., Hollander or Das et al. Szwarc discloses the claimed invention at Figs 2-3 with alloy 12, see top col. 2, and copper electrode strips welded thereto. The rolling and/or diffusion bonding does not result in a distinct product where for example, it is not clear what rolling is, or how it results in a distinct structure, and it is not seen how the disclosed welding process results in a distinct product. Alternatively, Hollander at col. 3, lines 22-25 discloses that diffusion bonding is a well known welding method for joining metal edges, while Das discloses the technique for terminal good strong terminal bonding at top of col. 8, and at col. 8, lines 60-65, and McKim, Jr. discloses the technique to eliminate hot spots at top of col. 8, and it would have been obvious to weld metal edges in such a manner for good bonding while eliminating hot spots where Szwarc discloses any type of welding for joining. In claim 10, the resistivity is met by the materials used. In claims 3-4 and 12-13, the strip is cut with a specific

cutout. An encapsulant is disclosed at col. 2, lines 49-51, meeting claims 14-17. In claim 2, solder is disclosed at col. 2, lines 34, which is deemed fused since it must be melted. In claim 7, two terminals are at ends with terminals on opposite surfaces thereof. In claim 9, any part can be a wire site where no wire is claimed and the wire can be joined anywhere.

11. Claims 1-14, 16 and 19-20 are rejected under 35 U.S.C. 102(b) as anticipated by Szwarc et al. '085 or, in the alternative, under 35 U.S.C. 103(a) as obvious over Szwarc et al. in view of McKim Jr., et al., Hollander or Das et al. Szwarc discloses the claimed invention at Fig. 1 with alloy 12, see top col. 2, and copper electrode strips welded thereto primarily as noted above, and as noted there in the alternative. All other claims are as noted with insulation, solder, and wires as disclosed at col. 2, lines 45-62, meeting claims 2, 8-9, 13 and 15-17. The terminals 18 and 16 are at ends on opposite surfaces for claim 7. Initial trimming is by controlling the thickness and width to minimize trimming, as noted at col. 1, lines 55-65. This is trimming without a cutout since no further cutout occurs if the device is in tolerance. Or the trimming of the remaining claims is met by the depicted trim cut in 12 at Fig. 1, where a portion of a corner is missing and part of the cut is in the current direction, and this is "without a cutout" since it is by laser ablation. The insulating cement at col. 2 meets claims 14 and 16-17.

12. Claims 1-6, 8-9, and 13-19 are rejected under 35 U.S.C. 102(e) as anticipated by Gerber et al. or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gerber in view of McKim Jr. et al. Hollander or Das et al. Gerber discloses the invention at Fig. 2 with terminals 20, 22 welded or plated, and the reasoning above applied as to the diffusion bonding element. For the trimming claims, see Fig. 13 where the cuts are along the current direction. If the parts 30 in Fig. 13

were removed, this would read on trimming "without cutouts", and applicant's claimed use of "comprising" does not preclude those parts 30. Claims 14-19 are disclosed via the epoxy coating 18, see col. 2, line 62. In claim 2 and like claims, terminals 22, 24 are disclosed as solderable coatings at col. 3, lines 25-32, so that solder is contemplated, and it must be fused or melted. In claim 13, the part of the resistor at Fig. 61, 2 shows no cuts therein, so that it is "without a cutout". See also the resistor in Fig. 9. There is no cutout in the resistor portion, the parts "cutout" are not part of the resistor.

13. Applicant's arguments filed 1/16/02 have been fully considered but they are not persuasive. As to the 112 rejection, applicant argues rolling is known, and then gives a definition whereby rolling creates a flattened surface. No mention of how the method is used to join two metals is made, nor is there any disclosure of flattening by rolling. Further it appears that if there is any distinction, it is due to diffusion bonding with rolling, created by heat, according to applicant's specification at page 6, for example. There is no support that rolling alone can create a bonding or a diffusion. Diffusion is claimed in the alternative. Hence, in McKim, applicant argues that rolling and fusion bonding are different arts than welding. This arguendo could be true, but there is no allegation as to how the difference in the method of rolling creates a distinct product from that of welding - which requires some kind of bonding action. As to a pin not being a metal strip, this is not correct. A metal strip can be cylindrical as a pin, where there is no argument or structural difference claimed. As to argument concerning lack of a cutout, applicant removes material by cutting, so that a "cutout" occurs. Hence, without a further clarification or claimed distinction of where the "lack of cut" is, it is not clear what is meant or

how there is any distinction in the claimed product. For example, applicant may arrive at a thinner product in Fig. 3B than the material started with in Fig. 3A, but the prior art shows resistors of various thickness so that there is no final distinction in the product structure. Each metal strip in the prior art has metal removed in order to form the width, length, and thickness, which determines resistance, so that in the end, a "trim" is made "without a cutout". This is explicitly taught at col. 6 of McKim as noted above where accurate control of thickness is a known technique and "grinding of edges" is explicitly taught. Also, both Szwarc patents disclose cutting to the desired size, and controlling thickness, etc., to form the desired resistance, and one discloses abrading - just like McKim's use of abrading and hence, applicants disclosed method for controlling thickness. Similarly in Gerber, the remaining structure in Fig. 6 and 9 shows no cutout in the remaining resistor portion - the portion where the current flows. Even in Fig. 13, the resistor portion 1-11 has no "cutouts" within that portion, any cutting is by cutting the adjacent strips, akin to initial cutting or abrading along the edges of the final resistor product, somewhat akin to applicant's Figs. 3A or 3B. Part of the cut portion happens to remain adjacent the resistor. If the parts 30 in Fig. 13 were removed, surely that would read on trimming without cutouts, and just as surely, applicant's use of "comprising" does not preclude those parts. No claimed structural difference is seen by applicant's method of trimming since applicant uses "comprises". As to the argument that Das and Hollander disclose fusion bonding, but there is no suggestion for the modification, this is not correct, as the motivation is noted above - forming a stronger bond, etc. Finally, "without any cuts" could mean by laser

abrasion, as an alternative, since that is not a "cut". The Szwarc patents each disclose an insulator as noted above.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Easthom whose telephone number is (703) 308-3306. The examiner can normally be reached on M-Th from 5:30 AM to 4:00PM.


KARL D. EASTHOM
PRIMARY EXAMINER